

IN THE CLAIMS

1. (Currently amended) A device for the measurement of gas flows, comprising:

a gas channel;

sensors arranged in the gas channel, wherein the gas channel is in the form of a compact block and groups of different ~~one of the~~ sensors with different measured values or measuring ranges are integrated without tubes directly in the gas channel and are installed in such a way that both humid and dry gases can be measured; and

a computer or microcontroller where, in the operating state, individual measured values of the different sensors are compared with one another by the computer or microcontroller so that a resultant measured value is specified from the individual measured values,

wherein two groups of sensors are provided, on the one hand pressure sensors for measurement of the pressure difference across a measuring resistance arranged in the gas channel and in the form of a sieve, of an absolute or ambient pressure and of a relative pressure in the gas channel, and, on the other hand, sensors for measurement of humidity, temperature and oxygen concentration, and the computer or microcontroller is provided with program parameters for calculating the gas flow which take into account environmental influences determined by the individual sensors, including at least one of humidity, ambient pressure, temperature and oxygen concentration, and relative pressure in the gas channel, so that an interfering effect of the environmental conditions on the measured values is compensated.

2. (Previously presented) The device as claimed in claim 1, wherein the sensors are screwed into the block from outside and can be removed therefrom or changed.

3. (Currently amended) The device as claimed in claim 1, wherein the gas channel and the measuring resistance or the sieve are designed in such a way that a laminar gas flow results in both directions of flow and hence bidirectional gas measurement without influencing of the measured value is possible.

4. (Currently amended) The device as claimed in claim 1, wherein at least one of:

a direct access knob (DAK) for direct access to help functions and measured values exists on a front panel of the device; and

the direct access knob (DAK) for direct access to help functions and measured values exists adjacent to the gas channel.

5. (Previously presented) The device as claimed in claim 4, wherein the direct access knob triggers a display or the delivery of actual values of different – optionally selectable – parameters to a display.

6. (Currently amended) The device as claimed in claim 2, wherein the gas channel and the measuring resistance or the sieve are designed in such a way that a laminar gas flow results in both directions of flow and hence bidirectional gas measurement without influencing of the measured value is possible.

7. (Currently amended) The device as claimed in claim 2, wherein at least one of:

a direct access knob (DAK) for direct access to help functions and measured values exists on a front panel of the device; and

the direct access knob (DAK) for direct access to help functions and measured values exists adjacent to the gas channel.

8. (Currently amended) The device as claimed in claim 3, wherein at least one of:

a direct access knob (DAK) for direct access to help functions and measured values exists on a front panel of the device; and

the direct access knob (DAK) for direct access to help functions and measured values exists adjacent to the gas channel.